

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022323**Date Inspected:** 22-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Components**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector, Anand Upadhye was present during the times noted above for observations relative to the work being performed.

NDT

BAY 14

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted notification number 08592.

Ultrasonic Testing (UT).

This QA inspector performed UT of approximately 10 % of the area previously tested and accepted by ZPMC Quality control personnel. This QA inspector generated UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

SEG3014B-217, 213, 209, 205, 201, 197, 193, 189, 185, 181, 177, 173, 169, 164, 160, 156.

**WELDING**

This QA Inspector observed the following work in progress:

BAY 14

This QA Inspector observed ZPMC qualified welding personnel identified as 048433 perform welding by Flux

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Cored Arc Welding (FCAW), on Deck panel diaphragm to deck panel diaphragm weld of OBG Segment 13CW. Weld joint is identified as SA3232B-017. ZPMC Quality Control (QC) Inspector identified as Zhang Lin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2233-ESAB. This QA Inspector noted welding variables were 230~245 amperes and 24.6 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 048696 perform welding by Flux Cored Arc Welding (FCAW), on Deck panel diaphragm to deck panel diaphragm weld of OBG Segment 13CW. Weld joint is identified as SA3232B-015. ZPMC Quality Control (QC) Inspector identified as Zhang Lin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2233-ESAB. This QA Inspector noted welding variables were 225~245 amperes and 24.5 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 066443 perform welding by Shielded Metal Arc Welding (SMAW), on Deck panel diaphragm to deck panel I rib stiffener weld of OBG Segment 13CW. Weld joint is identified as DP3146-001-256. ZPMC Quality Control (QC) Inspector identified as Wang Xiang Pin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2213-Tc-U4b-FCM-1. This QA Inspector noted welding variables were 135~145 amperes and 24.1 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 201583 perform welding by Flux Cored Arc Welding (FCAW), on Deck panel diaphragm to deck panel diaphragm weld of OBG Segment 13CW. Weld joint is identified as SEG3015L-012. ZPMC Quality Control (QC) Inspector identified as Wang Xiang Pin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2233-ESAB. This QA Inspector noted welding variables were 245~265 amperes and 24.3 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 066261 perform welding by Shielded Metal Arc Welding (SMAW), on Deck panel DP3145 to Deck panel DP3146 weld of OBG Segment 13CW. Weld joint is identified as SEG3015-004. ZPMC Quality Control (QC) Inspector identified as Wang Xiang Pin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2214-B-U2-FCM-1. This QA Inspector noted welding variables were 120~140 amperes and 23.7 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 047866, 066695 perform welding by Flux Cored Arc Welding (FCAW), on Edge plate to Side plate weld of Architectural housing assembly AH3003 of OBG Segment 13CW. Weld joint is identified as AH3003-001. ABF Quality Control (QC) Inspector identified as Shao Jian Yuan was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2231-ESAB. This QA Inspector noted welding variables were 280~300 amperes and 24.1 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 067765, 067609 perform welding by Shielded Metal Arc Welding (SMAW), on Vertical shear plate to Anchor plate weld of OBG Segment 14W. Weld joint is identified as SEG3020BB-002. ZPMC Quality Control (QC) Inspector identified as Zhu Lin was present to

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monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2214-Tc-U4b-FCM-1. This QA Inspector noted welding variables were 125~140 amperes and 24.2 volts, which appears to be in compliance with the approved WPS. See attached picture.

This QA Inspector observed ZPMC qualified NDT personnel perform Ultrasonic testing, on Stiffeners to Anchor plate and Stiffeners to Floor beam welds of OBG Segment 14W. Weld joints are identified as SEG3020AP-035, 037, 039, 041. See attached picture.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

No significant conversations were reported on this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, phone: 15000422372 , who represents the Office of Structural Materials for your project.

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**Inspected By:** Upadhye, Anand

Quality Assurance Inspector

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**Reviewed By:** Clifford, William

QA Reviewer